

**ABSTRACT**

**SPONTANEOUS PATTERN FORMATION  
OF FUNCTIONAL MATERIALS**

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A method of forming a pattern of a functional material on a substrate is disclosed. In accordance with the method, a first pattern of a first material is applied to the substrate and a second functional material is applied to the substrate and the first material. The first material, the second functional material, and the substrate interact to spontaneously form a second pattern of the second functional material on the substrate. The invention is directed to methods for spontaneous pattern formation of functional materials on substrates, and devices produced according to the methods of the invention. In particular, the methods of the invention provide a simple, inexpensive method for patterning a functional material on a substrate, with broad applicability to numerous devices.

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